AF/1742 FW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of: **NISHIUCHI, et al.**

Group Art Unit:**1742**

Serial No.: **09/977,363**

Examiner: **George P. Wyszomierski**

Filed: **October 16, 2001**

P.T.O. Confirmation No.: 4158

For: **RARE EARTH METAL-BASED PERMANENT MAGNET, AND PROCESS FOR PRODUCING THE SAME**

SUBMISSION OF REPLY BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

August 24, 2004

Sir:

Submitted herewith are an original and two copies of a Reply Brief in the above-identified U.S. patent application.

In the event that any additional fees are due with respect to this paper, please charge Deposit Account No. 01-2340. This paper is filed in triplicate.

Respectfully submitted,

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Enclosures: Duplicate of this paper; Reply Brief and two copies

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REPLY BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

August 24, 2004

Sir:

In response to the Examiners Answer dated **June 28, 2004**, the following comments are respectfully submitted.

REMARKS

In sections (1) to (7) of the Examiner's Answer, the Examiner acknowledges that Appellant's statements made in corresponding sections (I) to (VII) of the Appeal Brief. In section (8), the Examiner acknowledges that the claims in Appendix (IX) of the Appeal Brief are correct. In section (9), the Examiner indicates that JP Kokai 07-230906 will be referred to as "JP '906" or "the '906 reference."

In Section (10) of the Examiner's answer, the Examiner summarizes the Grounds of Rejection, and presents additional arguments.

Appellant maintains the position established in the Appeal Brief. Appellant here responds to the arguments in the Examiner's answer, in particular noting errors in the Examiner's arguments.

With regard to paragraph [0022] of JP '906, the Examiner notes in the Examiner's Answer that the organic system precursor "3-glycyl oxy-propyltrimethoxysilane" is 3-glycidoxypropyltrimethoxysilane, with a calculated molecular weight of about 236. The Examiner then goes on to address the "0.1 wt% to 20 wt% in terms of the metal oxide" limitation in the present claims, for which there is no corresponding explicit teaching in JP '906. Here, the Examiner appears to be responding to Appellant's remarks on page 8 of the Appeal Brief, in which it was stated that "the wt% of the components in the sol in JP '906 cannot be inferred from [the] disclosure" in the reference.

The Examiner addresses this on page 4 of the Examiner's answer, in section (a), performing

a calculation:

> "a) If one uses a 30 mol% ratio of silica (molecular weight = 60 to organic precursor component as taught in paragraph [0027] of JP '906, and further one uses GPMS (molecular weight = 236) as the organic precursor component as taught in paragraph [0022] of JP '906, then the weight percentage of silica in the overall mixture would be (60 X 30)/((236 X 70) + (60 X 30), or 0.1 wt% .... Thus, the '906 reference teaches substantially the same weight percent silica precursor component as recited in the appealed claims."

However, Appellant submits that the Examiner's analysis is incorrect and does not reveal the weight percentage in the reference of silica in the sol, or even of the "silica system precursor." In the Appeal Brief, Appellant argued that JP '906 did not teach the wt% of the "silica system precursor component" or the "organic system precursor component" in the sol. Rather, JP '906 appears only to have discussed the relative ratio of these components.

The weight percentage calculated by the Examiner in paragraph (a) on page 4 of the Examiner's Answer refers to paragraph [0027] of JP '906. However, paragraph [0027] discloses only the ratio range of (30-50) mol % silica system precursor to (50-70) mol% organic system precursor (that is, precursor mol percentages summing to 100%). This is **not** a disclosure of overall weight percentage of any component in the sol, which also has a solvent.

In the Examiner's hypothetical example, the Examiner uses **silica** as the "silica system precursor" and GPMS as the "organic system precursor." However, it is noteworthy that JP '906 describes "tetraethyl orthochromate silicate, etc." as the silica system precursor (paragraph [0021]), but does not discuss "silica" itself as this component. In fact, silica is a component constituting a coating layer finally formed from the use of the silica system precursor as a raw material. Silica is

not the silica system precursor.

Even taking the Examiner's use of "silica" as the silica system precursor, there is an error in the Examiner's calculation. A ratio of 30mol% silica to 70mol% GPMS would have (0.3 X 60)/((0.3 X 60) + (0.7 X 236)) = 18/183.2 = **9.8wt%** silica in the mixture of the two components, not **0.1wt%**. (That is, the Examiner neglected a factor of 100). With a 50/50 mol% ratio, the amount of silica would be 20 wt%, as the Examiner stated.

Appellant again emphasizes the most significant point, that the combination of the "organic system precursor" and the "silica system precursor" in JP '906 is **not a sol**. The solvent for the sol and the concentrations of the precursor components in the sol **do not appear to be stated** in JP '906. Therefore, the Examiner **has not calculated the weight percentage of silica in the sol in JP '906**, and Appellant continues to argue that this parameter is not disclosed in the reference, and cannot be inferred.

In paragraph (b) on page 4 of the Examiner's answer, the Examiner states:

> "b) With regard to the carbon and its amount in the final oxide film, the examiner respectfully asserts that because the materials and process steps employed in the '906 reference and those used in the process of the claims on appeal are substantially the same, it is a reasonable assumption that the final products would likewise be the same."

Appellant respectfully submits that this argument is improper. The Examiner has not explained which "materials and process steps" in JP '906 are considered to be the same as in the present application. In fact, Appellant respectfully argues that JP '906 does **not** clearly disclose the

process involved and, in particular, does not disclose the composition of the sol. Appellant has already contrasted the examples in JP '906 to those in the present application in the Appeal Brief, demonstrating that the disclosure of the reference is very different from that of the present application, and this issue is also addressed in regard to section (11), discussed below.

In paragraph (c) on page 5 of the Examiner's Answer, the Examiner argues similarly, with regard to claim 14, that the processes of the prior art and the present invention are the same. Appellant again argues that this assessment of the prior art is not adequately explained and is incorrect.

In section (11) of the Examiner's answer, the Examiner presents a Response to Argument.

In the first paragraph of section (11), the Examiner addresses Appellant's argument on pages 7-9 of the Appeal Brief, that the mol% of the components disclosed in paragraph [0031] of JP '906 does not provide a teaching for the wt% of these components in the sol. The Examiner then refers to paragraph [0022] of JP '906, and to the calculations presented by the Examiner in preceding section (10) of the Examiner's answer.

However, Appellant notes that paragraph [0022] of JP '906 appears only to discuss examples of the "organic system precursor." This paragraph does not even mention the "silica system precursor" and provides no disclosure of **any** concentrations of components in the overall sol.

In the second paragraph of section (11), the Examiner addresses Appellant's arguments from

page 10 of the Appeal Brief, that the exemplary sol in JP '906 does not resemble the examples in the present application, stating: "The Examiner notes that limitations from the specification are not read into the claims." However, this portion of the Appeal Brief was presented to directly rebut the Examiner's assertion that the composition taught by the reference is substantially identical to that "**disclosed in the specification**" (final Office action, page 4, line 5). (The Examiner has made this same argument again in section (10) of the Examiner's Answer, as discussed above.) As such, Appellant's argument from the Appeal Brief is proper and appropriate. Appellant maintains the position that the processes in the prior art (to the extent that they are disclosed) and those in the present application are very different, and therefore the Examiner's inference that "it is a reasonable assumption that the final products would likewise be the same" is incorrect.

On page 6, line 5, of the Examiner's Answer, the Examiner takes the position that:

> "if one were to employ a silica precursor component and use GPMS as an organic precursor component, as taught by JP '906, then would expect a carbon content within the presently claimed range to result. Appellant has not shown by any objective evidence that the carbon content claimed is in any way distinct from that present as a result of the process of JP '906."

In response, Appellant notes that the Examiner now appears to be making an inherency argument: that the carbon content in JP '906 would inherently be the same as that claimed. Although not stated in the same words in the Final Office action, this appears to be the same argument made on page 4 of the Final Office action.

However, if this is an "inherency" argument, the burden is **on the Examiner** to provide a "basis in fact and/or technical reasoning" why the limitation would be inherent. MPEP 2112 states,

in part:

> "The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993)(reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art); *In re Oelrich*, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981).
>
> "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original) ..."

In the present case, the Examiner's only provided basis is the statement that "the composition ... and process steps ... taught by the reference are substantially identical to the composition and process steps recited in the claims and disclosed in the specification ...." (final Office action, page 4, lines 2-5).

Contrary to the Examiner's assertions, Appellant has clearly pointed out differences between the examples in JP '906 and those in the present application, and has noted that JP '906 **does not even disclose the concentrations of components in the sol**. Without this information, it is **impossible** to infer what carbon content would result in JP '906. That is, no particular carbon content can be considered inherent in JP '906, given the lack of disclosure in the reference.

Appellant therefore maintains that the Arguments presented in the Appeal Brief are correct, and maintains the appeal as established in the Appeal Brief.

Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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